PALOMAR ENERGY PROJECT (01-AFC-24)
CEC STAFF DATA REQUEST NUMBER 43

Technical Area: Noise **Response Date: April 8, 2002**

REQUEST:

Please quantify the predicted noise levels due to operation of the RAMCO and CalPeak peaker units, at the nearest sensitive receptors.

RESPONSE:

A cumulative impact analysis was performed for the noise signature of the Palomar project, combined with the noise signatures of the CalPeak and RAMCO peaking plants. Cumulative noise exposures were developed at the sensitive receptor location that would have the greatest potential noise exposure from the Palomar facility. As shown in the AFC, this sensitive receptor location would be single family residences about 2,300 feet southwest of the Palomar site. Noise generation data for the CalPeak project was obtained from the CEC AFC for that project. As the RAMCO facility is a similar size peaking plant to the CalPeak facility, RAMCO plant noise emissions were assumed to be the same as for CalPeak.

Under direct line of sight conditions with no noise level reduction for atmospheric absorption or for terrain interference, the CalPeak project would create a 36 dB LEQ level at the maximally exposed location for the Palomar project. The CalPeak noise study indicates that a terrain reduction of 10 dB is to be expected. Absorption effects of 6 dB were calculated for the long source-receiver transmission path between CalPeak and the Palomar receptors. Thus, the CalPeak facility would produce a residual noise level of 20 dB at the maximally exposed Palomar receptor location.

Combining the 20 dB residual noise level from one plant (CalPeak), with a 20 dB noise level from RAMCO would yield a combined noise level of 23 dB LEQ. Since noise values are measured on a logarithmic scale, the addition of a 23 dB noise source (CalPeak plus RAMCO) to the Palomar project-only noise level of 37 dBA at the sensitive receptors southwest of the Palomar site, would create a cumulative noise level of 37.2 dBA at the same receptor location. Thus, there would be no measurable cumulative noise effects at the maximally exposed Palomar receptor location, when considering the two peaker plants together with the Palomar facility.